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## FOREIGN TECHNOLOGY DIVISION



BIOENERGETIC LIFE FIELDS

by

W. Iniuszyn



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VICTOR INIUSZYN

Before a year is up we have gone back to the well-known Soviet scientist from Alma Ata Dr. W (V) Iniuszyn, with the request that he write for "Technical Horizons" an article on the topic of biocybernetics. The text that we received from the young learned man goes far beyond the theme delineated. We think however that it will interest many of our readers.

### BIOENERGETIC LIFE FIELDS

Several years ago doctors began to interest themselves in acupuncture, an old Chinese method of cure by pricking with needles in precisely determined places of the human body. The positive results that doctors using this method recently have obtained have caused an interest in those places of the body that are supposed to be pricked with needles. Why precisely these and not other points are to be pricked and why are these prickings effective in combatting disease? Here are the questions which it will probably be possible to answer after investigating the material nature of the so-called biofield, or bioenergetic field of living organisms. In our times man has made many discoveries that unveil the secrets of materials. He knows very little however about himself, about plants, or about animals as well as about the physical phenomena that accompany their lives. The complicatedness of the biological processes can be equated only to the infinity of the kosmos. <sup>CERTAINLY HE KNEW</sup> Recognizing very slowly this "cosmos" of his man informs himself that the potential possibilities of life are strictly endless. This is connected with the new bioenergetic "spaces" of living organisms. Biofields are the result of superimposition of many physical fields.

For quite a while now a number of learned men have conjectured the existence of the biofield. They even tried to measure it but this was made impossible by the imperfection of the tools of investigation, and science about biofields was nearer magic than true science. However they gleaned very many interesting observations, whose explanation keeps parapsychology busy. It is strictly a descriptive science gleaning facts about the unusual properties of humans, such



as the transmission of thoughts over distance, or action on the environment by way of psychic tension.

At present there is being born a new direction (of attack) — psycho-energetics —, which has at its disposal precise investigational systems and the methods of biophysical investigations. There are being worked out experimental models, there is being sought a direct energy effect on the operation of the internal organs, nerves, and even of the human brain. Already Constanty Ciolkowski has considered that the investigation of the structure of the connection between special fields, contributes to the knowing of the secrets of the living microcosm and of the secrets of the existence of living, thinking, material. The works started from plants. They don't have any brain but they are distinguished by many unusual properties.

At the beginning of our century a biophysicist, the king of the experimenters, the great learned man from India, Jagadis Chandra Bose, wrote a book entitled "The Nervous Mechanism of Plants" in which he proves that the reactions of plants are little distinguished from the actions of animals. Of a similar opinion was also my teacher, a student of the well-known revolutionary A. N. Sewercew, a member of the Academy of Science of the Kazak SSR, Bronislaw A. Dambrowski. He considers that the evolution of life on earth constitutes a monolithic flow in which these same regularities hold force.

Thus also when I read the publications of the American learned man Cleve Backster, in which he writes that plants feel, picking up stimuli (goads) from the environment, I do not consider this as absurd. This is already at present a phenomenon <sup>well</sup> known by all. The experiments carried out by C. Backster have to answer the question

#### DO PLANTS FEEL?

Backster considers that stately plants can read off the thoughts of a human, they can feel his agitation and changes of emotional state. They are "pleased" when they are watered and nursed, and they feel fear when someone wants to destroy them. They can also "sympathize" when people or animals near

them are hurt. Unfortunately we still do not know by what channel there is carried out the connection between the plants and people or animals. It is certain however that the connection is not made by already familiar natural and physical phenomena. Moreover Backster contends that distance does not have any influence on the phenomena of "primitive original consciousness".

Backster's experiments were carried out very precisely <sup>but</sup> and in spite of this he is aware that criticism deduced from these results is inevitable. However the interest in these problems is not weak and Backster and his co-workers are overwhelmed with requests for detailed information. They don't hurry with their communication however, hoping to gain the greatest possible certainty confirmed in many experiments. The first were properly a result of chance. Sometime while working Backster felt tired and thus resolved to take a break and water the flowers. When he had finished the watering there came to him the thought whether it wouldn't be possible with the help of an automatic system of registration to determine the speed of passage of water from the roots to the leaves. With such a system it is possible with human beings to register changes in breathing, blood pressure, and pulse, as well as the electric properties of the skin. These changes are called the "galvanic skin reaction" or the "psychogalvanic reaction." Especially in this last sphere does Backster have a huge experience, hence he recognized that the psychogalvanic reaction could be used also with plants. For this purpose along both sides of a philodendron leaf he connected electrodes that were hooked up with the registering system. He placed the plant in a vessel of water. Unfortunately the rise in the level of water in the plant was not shown with this apparatus, but after a minute from the moment of beginning of the experiment there was recorded an unusual trace whose form reminded him—as Backster called it—of the reaction curve of a human being in a state of emotional agitation. The learned man had never before this observed such a phenomenon with plants. How then is it possible to explain the similarity of the record coming from the plant and the human? Was there surprise at what so agitated the plant? He thus undertook further investigations: he dipped the leaves in boiling coffee, but this caused no reaction. Now Backster resolved to tease the plants more severely, and he decided to burn the leaf located between the electrodes. At the moment of making this decision the plant suddenly reacted violently, which caused a change in the recording on the recording instrument. Since the learned man at this time had not moved and had not touched the plant and had only thought of the job of paining it then obviously the plant could pick up human thoughts.

The experiments were repeated many times. They investigated also the reaction of plants to the killing of shrimp. In order to avoid an error or the participation of a human in this phenomenon, this experiment was carried out automatically. The killing of shrimp (s) by throwing them live into boiling water was carried out by a specially programmed automaton. Three philodendrons whose reaction was being investigated, were placed in separate rooms, and were connected to a many channel recording system. None of the plants was located in the room in which the shrimp were thrown into the boiling water. The recording of the results was performed automatically, without the participation of a human. It appeared that 5-7 seconds after the moment of throwing the shrimp into the water, the devices recorded an intensification of the activity among the plants. Since all the actions at the time of the experiment were carried out automatically the reason for the agitation of the plants could only be the death of the shrimp.<sup>5</sup> And so there arose the next question: whether at the time of the death of a cell there is transmitted some sort of signal to the living?

Thus did there really exist—as Baxter conjectures— some sort of unknown type of signal connecting all living organisms? The nature of such a connecting channel is for the moment a riddle. We know that this signal does not appear in the spectrum of known frequencies, no material impediments nor distance hold it back. Baxter tried setting up in the path of this signal, various screens, but he did not find anything that would hold it back.

Some experiments indicate that plants distinguish signals and record them in a selective manner. What<sup>sort</sup> was for instance Baxter's surprise when he discovered that plants give a recording in agreement with the heart beat frequency of a selected human, located in the room. For unknown reasons the plants react to the heartbeat of only this one person. They especially tune in on the people who take care of them.

Baxter distinguishes two types of sensing: first: that a plant extraordinarily tunes in on all that is happening in its direct environment; second: that plants can tune themselves very powerfully on something specially selected. If thus the plant is tuned to some selected person, then that person can stay where it wants and the plant will even thus be "tracking" it.



Another experiment had to do with memory among plants. One of the experiments was based on the (following set of facts): Into a room in which there were two plants, there entered separately six students. One of them, being completely alone, killed one plant. The remaining <sup>(PLANT)</sup> while (the other was) alive was hooked up to a recording system and into the room there entered successively these same students. At the exit of the (first) five the plant did not react but when there entered the sixth the one who had killed the first (plant) the live plant reacted suddenly— it showed a lot of "fright".

(LIFE DURING LIFE)

#### EVALUATION OF BACKSTER'S EXPERIMENTS

The well-known physiologist of plants, Dr. Harold Saxton Burr, who has for 60 years investigated the characteristics of living organisms (plants, animals and people), considers that in all living material there exists a field which it is possible to measure with suitable equipment. Doctor Aristotle H. Esser, and his assistant, a physicist from the government hospital in Orangeburg in New York state, <sup>have</sup> conducted many experiments that corroborated Backster's theories.

The physicist, Dr. Hal Puthoff, from Stanford University considers that for explaining the phenomena described by Backster one can use the hypothesis of elementary molecules that move with a speed greater than light, the so-called tach-ions. He is carrying on special experiments which have as their purpose the determination of the speed of propagation of this secret signal. If it turns out less than the speed of light, then one must seek explanations of its nature in the area of the spectrum of electromagnetic waves or even in the area of sound waves. If however this speed will turn out greater than the speed of light then it will be necessary to examine whether tach-ions play a role in the transmitting of information between living cells.

The chemist Dr. Marcel Vogel, an authority in the area of liquid crystals, considers that Backster has proved the existence among plants of a reaction to the existence of man. "People—contend Vogel— produce very weak electrical fields just as plants do. Thus if a human field closes on a plant field then there happens among them an exchange of information and there are observed



reactions which can be measured. An intense human thought about the burning of a plant is a sufficient stimulus to cause a reaction in the plant. For they are unusually sensitive devices that transmit emotions experienced by the human. ".

Apparently just like this many western learned men are of the same opinion as Backster. They consider that plants can sense human and animal emotions.

What sort indeed is that type of radiation that transmits a fear signal?  
20 years ago the Soviet learned man Alexander Gurwicz proved, that at the time of the dying off of a cell there is emitted a very weak ultraviolet radiation which can be received by living cells. Member of the Academy of Sciences of the USSR, N. P. Kaznczajew, also has experimentally confirmed the existence of a connection between living cells. He has shown for instance that cells infected by a virus can cause the same changes in cells isolated from this virus.

There deserve special attention the experiments of Kirlian's associates, who discovered the glowing of leaves of plants under the influence of the effect of high frequency currents. This phenomenon was exploited during the investigation of the influence of the human emotional state on plants. When a human especially prepared for the experiment excites in himself a feeling of fright or anxiety, the curve of the recording of the glow intensity of the plant leaves started to change violently.

At the university in Alma Ata there has been worked out a special method of photographing from a distance of 1-2 cm, of plants in the light sent out thru them. It is the so-called bioradiography, which can be explained in simplification, as follows: the plant at the cost of its own radiation sketches ((in full darkness) its own picture. The Moldavian electrophysiologist, S. N. Masloborod, has measured the potential of budding maize seeds. It seems that the potential of budding maize seeds in a group is greater than of those growing in isolation.

I suppose that all these experiments could be explained with the help of

the existence of a biological energy field. Actually I don't go along with Backster's view, that plants are endowed with consciousness, since it is a result of human social efficiency, however for certain there exist among plants peculiar forms of feeling. Without meddling here in polemics, with different hypotheses than Backster I consider that the problems of mutual effect between living cells, reactions of plants to weak biofield impulses, a field that has with certainty a material source, deserve penetrating investigations. Already at present there have been accumulated many undeniable proofs of the existence of this field, among other things as a result of the latest attainments of radiotechnology, quantum electronics, cybernetics etc.

I think that what Backster calls original (primordial) perception is nothing other than the transmitting of information with the help of the biofield which among the higher plants has a very complicated nature. The energy system of a plant reacts even to very insignificant changes caused by biofields. This is the phenomenon of bioresonance: oscillations incited by humans call forth a resonant answer on the part of the energy system of the plant. The capability of resonant tuning of the plant to the human being is all the stronger the longer their contact has been. The "memory" of plants is connected with the appearance in their energy system of slowly damping oscillations. The appearance after a long absence of a source of biofield of similar characteristics causes resonance, which is expressed in a change of the electrical characteristic and the optical ones of the plant and of its environment. Can one exploit this phenomenon for the regulation of the bioenergetic state of a human? And perhaps acupuncture is precisely that method of normalizing the energy state of the biological field of the living organism? Doctors in the old days, gropingly, without any tools, discovered 364 junction points of the biofield. Moreover they learned in many cases to suitably change the energy state of organisms by acting on parts of the skin. Living organisms are built of uniform bioplasm of very complicated structure. The pricking points in acupuncture may be places of "exit" of bioplasma points. Such an assumption can explain unusual connections between internal organs and those places on the skin.

Bioplasm with a biofield specific for it is already in the zygote ((egg cell) from which there develops the future organism. The energy connection is preserved by the bioplasm. The nervous system is a higher stage of regulation of unusually delicate processes in the living organism. Plants do not have

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this system but even they are distinguished by a very complicated capability for reaction. The selective action between a plant and a given human can be conditioned by the phenomenon of resonance. One can assume therefore that non-dying out coherent oscillations in the bioplasm have a complicated characteristic. The concurrence of the oscillation characteristics of two organisms can cause the appearance of resonance, which then calls forth many biophysical and physiological processes.

Acting with a current, needle, or burning cigarette on certain points, we evoke reactions of the bioplasm, changes of oscillation frequencies. In a bioplasm body there arise information channels, which can even cause even painlessness (phenomenon).

The phenomena briefly discussed here open huge prospects before biology and medicine. With the help of special systems doctors will be taking off information about the "frame of mind" of determined places on a patient's skin. These pieces of information will be transmitted to a computer, which will establish a diagnosis in the course of 3-4 minutes. Then thru selected points in accordance with the assigned program, it will be possible to act on the organism with a current or laser radiation. During the operation there will not be used anesthetic chemical substances. An examination of the nature of the biofield opens also new horizons for effecting human emotional states.

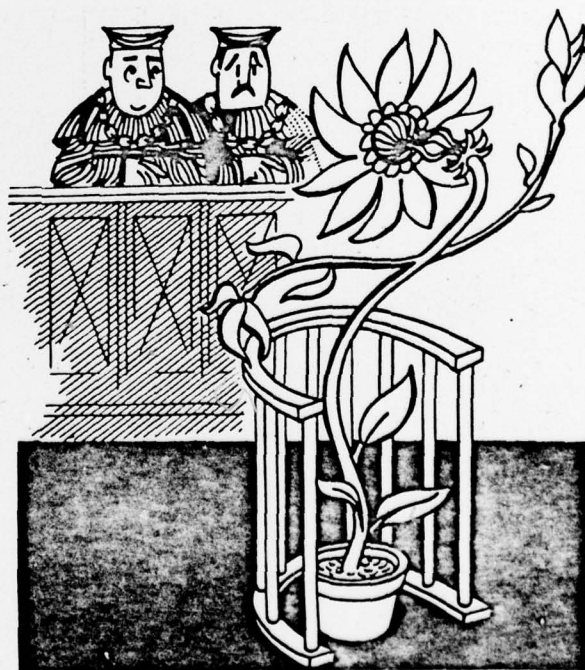
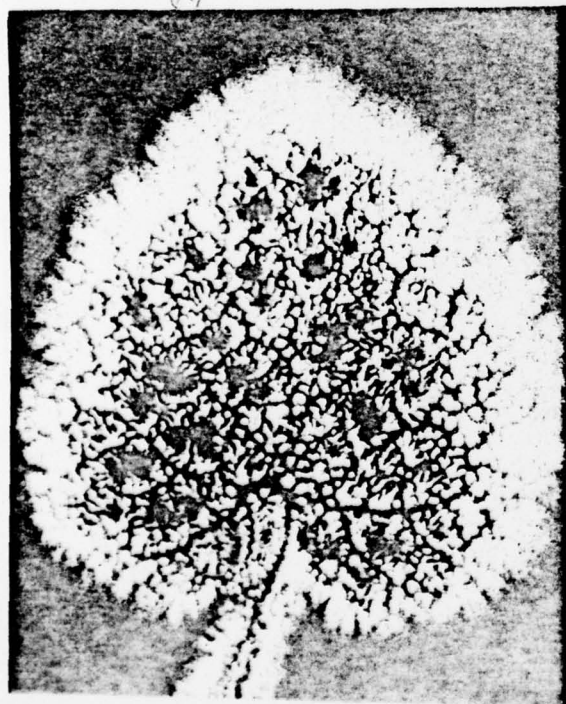
The academician B. A. Dambrowski in one of his last works wrote: "it is possible that precisely in the field of bioenergetics there lies that biological bomb, which will make it possible for learned men to spread knowledge about material enlivened to the highest quality of our planet". I agree with this view and I consider that we are standing on the threshold of revealing discoveries, which will quickly be exploited in practice. The recognition of the biofield increases the intellectual development of the human brain and will cause the working out of new forms of fast science and will make possible an increase of the emotional capabilities of man. Moreover the examination of the biofield of plants will make possible better regulation of their growth which will contribute to the increase of crop yields.



Here I would like to tell about a very important problem—the preservation of nature. We are located in a life field, the biosphere is one gigantic organism and violation of it is very dangerous. One can <sup>NOT</sup> violate the source of the biofield with impunity, since this violates the energy system of life. Hence it is necessary not only to protect nature but also to regulate its energy equilibrium with the help of very precise scientific methods. For man must develop himself in harmony with the whole of nature. The stability of the human psyche, of its energy resources, can be secured only by diverse connections with the whole living world.

Victor Iniuszyn  
 Doctor of Biological Sciences  
 Director of the Chair of Biocybernetics  
 The University at Alma Ata

Efekt Kirliana — (A)



(B) Przysięgam, że będę mówił prawdę i tylko prawdę...  
 (C) Rysował Stanisław Chorzemski

(callouts) (A) Kirlian's effect  
 and only the truth.....

(B) I swear that I will be telling the truth  
 (C) Sketched by Stanislaw Chorzemski



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